

CLAIMS

What is claimed is:

1. An organic electronic device, comprising:

5 a deposition surface;

a plurality of organic layers, each said organic layer
fabricated by depositing an organic solution into regions of
said deposition surface, further wherein a first portion of said
organic layers are cross-linked to render said first portion of
10 said organic layers insoluble.

2. A device according to claim 1 wherein said plurality
of organic electronic layers includes an active electronic
layer.

15 3. A device according to claim 2 wherein said plurality
of organic layers includes an hole transport layer.

4. A device according to claim 3 wherein said plurality
20 of organic electronic layers are capable of performing at least
one of a hole blocking function, an electron blocking function,
an electron transport function, a hole transport function, an
optical confinement/wave-guiding function, an electron injection
, a hole injection function, an emission function, an absorption

function, a chemical or physical or photophysical sensor
function .

5. A device according to claim 1 wherein said cross-
5 linking is performed by applying ultraviolet radiation to said
device.

6. A device according to claim 1 wherein some of said
organic solutions blend cross-linking groups for a base organic
10 solution before said organic solution is cross-linked.

7. A device according to claim 1 wherein some of said
organic solutions include an initiating agent to assist in the
cross-linking process.

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8. A device according to claim 1 wherein said cross-
linking is achieved by thermally.

9. A device according to claim 3 wherein said organic
20 electronic device is an OLED device.

10. A device according to claim 9 wherein said deposition
surface is the lower electrode layer.

11. A device according to claim 10 wherein said active electronic layer is an emissive layer, said emissive layer emitting light upon charge recombination.

5 12. A device according to claim 11 further comprising a cathode layer disposed over said plurality of organic layers.

13. A device according to claim 9 wherein said hole transport layer is fabricated from a modified PEDOT:PSS
10 solution.

14. A device according to claim 1 wherein said device behaves as an organic transistor.

15 15. A device according to claim 1 wherein said device behaves as an organic opto-electronic device.

16. A device according to claim 1 wherein said plurality of organic layers include at least one hetero-structure.

20 17. A device according to claim 3 wherein said electron blocking function is performed in said hole transport layer.

18. A device according to claim 3 wherein said wave-guiding function is performed in said hole transport layer.

19. A device according to claim 3 wherein said electron
5 transport and hole blocking functions are performed in the same
one of said organic layers.

20. A device according to claim 3 wherein said electron
transport function is performed in one of said organic layers
10 dedicated thereto.

21. A device according to claim 3 wherein said wave-guiding function is performed in one of said organic layers
dedicated thereto.

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22. A device according to claim 3 wherein said electron
injection function is performed in one of said organic layers
dedicated thereto.